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1 UNITED STATES PATENT AND TRADEMARK OFFICE

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4 BEFORE THE BOARD OF PATENT APPEALS
5 AND INTERFERENCES

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8 *Ex parte* JEFF S. EDER

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11 Appeal 2009-012839
12 Application 09/688,983
13 Technology Center 3600

14

15

16 Before TERRY J. OWENS, HUBERT C. LORIN, and
17 ANTON W. FETTING, *Administrative Patent Judges.*
18 FETTING, *Administrative Patent Judge.*

19 DECISION ON APPEAL¹

¹ The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, or for filing a request for rehearing, as recited in 37 C.F.R. § 41.52, begins to run from the “MAIL DATE” (paper delivery mode) or the “NOTIFICATION DATE” (electronic delivery mode) shown on the PTOL-90A cover letter attached to this decision.

1 STATEMENT OF THE CASE²

2 Jeff S. Eder (Appellant) seeks review under 35 U.S.C. § 134 (2002) of a
3 non-final rejection of claims 157-181 and 201-213, the only claims pending
4 in the application on appeal. We have jurisdiction over the appeal pursuant
5 to 35 U.S.C. § 6(b) (2002).

6 The Appellant invented a way for developing and continuously operating
7 an automated on-line risk transfer system (Specification 2: Background of
8 the Invention).

9 An understanding of the invention can be derived from a reading of
10 exemplary claim 157, which is reproduced below [bracketed matter and
11 some paragraphing added].

12 157. A computer readable medium having sequences of
13 instructions stored therein, which when executed cause the

² Our decision will make reference to the Appellant's Appeal Brief ("App. Br.," filed April 30, 2007), the Examiner's Answer ("Ans.," mailed July 23, 2007), and the Appellant's Reply Brief ("Reply Br.," filed September 8, 2007). The Appellant filed a Supplemental Appeal Brief and Supplemental Reply Brief on October 14, 2007. As these were filed over two months following the Answer, these documents are outside the scope of this appeal and therefore are not considered. 37 C.F.R. § 41.41. The Answer contains claim objections at Ans. 8 that are beyond the scope of this appeal.

1 processor in a computer to perform a risk management
2 optimization method, comprising:
3 [1] preparing data from a plurality of enterprise transaction
4 systems for use in processing;
5 [2] measuring a plurality of risks using at least a portion of said
6 data;
7 [3] identifying one or more risk management activities based
8 upon said risks;
9 [4] calculating an amount of capital available for said risk
10 management activities using at least a portion of said data; and
11 [5] determining a combination of risk management activities
12 that optimizes aspects of enterprise financial performance
13 selected from the group consisting of
14 market value,
15 risk and
16 combinations thereof
17 within a constraint of the available capital.

18 The Examiner relies upon the following prior art:

Ching	US 6,078,901	Jun. 20, 2000
Ranger	US 6,301,584 B1	Oct. 9, 2001
Baseman	US 6,671,673 B1	Dec. 30, 2003
Tamayo	US 6,836,773 B2	Dec. 28, 2004
Packwood	US 7,006,992 B1	Feb. 28, 2006

19 Claims 157-181 and 201-213 stand rejected under 35 U.S.C. § 101 as
20 directed to non-statutory subject matter.

1 Claims 157-181 and 201-213 stand rejected under 35 U.S.C. § 112, first
2 paragraph, as not enabling a person of ordinary skill in the art to make and
3 use the claimed subject matter from the original disclosure.

4 Claims 157, 159-163, 165-167, 169, 171-176, and 178-180 stand
5 rejected under 35 U.S.C. § 103(a) as unpatentable over Baseman and
6 Tamayo.

7 Claims 201, 202, 204, 207, 209, and 211 stand rejected under 35 U.S.C.
8 § 103(a) as unpatentable over Baseman, Tamayo, and Ching.³

9 Claims 158, 164, 170, and 177 stand rejected under 35 U.S.C. § 103(a)
10 as unpatentable over Baseman, Tamayo, and Packwood.

11 Claims 205 and 210 stand rejected under 35 U.S.C. § 103(a) as
12 unpatentable over Baseman, Tamayo, Ching, and Packwood.

13 Claims 168 and 181 stand rejected under 35 U.S.C. § 103(a) as
14 unpatentable over Baseman, Tamayo, and Ranger.

15 Claims 203, 206, and 208 stand rejected under 35 U.S.C. § 103(a) as
16 unpatentable over Baseman, Tamayo, Ching, and Ranger.⁴

³ There is no rejection over art against claims 212 and 213. Apparently the Examiner erroneously found that these claims depended from a canceled claim. Ans. 8. These claims actually depend from claim 209, which is still in the application and under consideration.

⁴ The Examiner omitted Ching from the list of references in the rejection at Ans. 25, but made clear this rejection was based on the rejection of parent claims 201 and 207 whose rejection did include Ching. Accordingly, we take the omission as a mere typographic error.

1 ISSUES

2 The issue of eligible subject matter turns on whether the claims are
3 directed to abstract ideas absent any specific application. The issue of
4 enablement is directed to whether one of ordinary skill would have known
5 how to practice the claimed invention. The issues of obviousness turn on
6 whether the Examiner found that the references were to be combined or
7 whether the secondary references merely provided evidence of common
8 modeling technique, and whether various limitations specified by the
9 Appellant were missing from the references.

10

11 FACTS PERTINENT TO THE ISSUES

12 The following enumerated Findings of Fact (FF) are believed to be
13 supported by a preponderance of the evidence.

14 *Facts Related to the Prior Art*

15 *Baseman*

16 01. Baseman is directed to assisting senior management decision-
17 making, and to closely monitoring various performance measures
18 of an entire enterprise by employing a more comprehensive
19 approach to maximizing profitability, and increasing revenue, and
20 explicitly considering risk, particularly in the context of supply
21 chain management. Baseman 1:8-15.

22 02. Baseman's references to options include real options. Baseman
23 5:32-33.

1 03. Baseman explicitly considers risk in a number of different
2 ways, but probably most important is its affect on funding costs
3 and the firm's cost of capital. The approach seeks to reduce
4 interest expense by exploiting supply chain management (SCM) to
5 expand the firm's set of financing opportunities, and by improved
6 decision-making. And it seeks to reduce the firm's cost of capital
7 by reducing sensitivity to a suite of risk factors, including foreign
8 exchange risk, interest rate risk, political risk, catastrophe risk,
9 business risk, counterparty risk, credit risk, and geographic risk.
10 Baseman 6:22-32.

11 04. Traditional SCM solutions take a firm's ownership structure as
12 a given, and attempt to optimize its supply chain by minimizing
13 costs. For global and multinational firms, there may be significant
14 tax minimization opportunities by: Optimizing ownership
15 structure and transfer pricing methodologies for an existing supply
16 chain with the objective of maximizing profit; Optimizing supply
17 chain design for an existing ownership structure, by seeking to
18 maximize profit or value of the firm within the context of
19 considerations such as international taxation, foreign exchange
20 risk management; and Simultaneously optimizing supply chain
21 design and ownership structure, with the objective of maximizing
22 profit or the value of the firm. Baseman 7:53-8:3.

23 05. Supply chain design can also be used to reduce a firm's foreign
24 exchange exposure by matching production locations with
25 customer locations. However, when considering the impact of
26 foreign exchange risk, there is a trade-off between a firm's

1 profitability, and the benefits of reducing risk by creating a supply
2 chain that is "naturally hedged." By using a constrained
3 mathematical model with this trade-off modeled in the objective
4 function, one can create an efficient frontier showing optimal
5 expected profits for a chosen level of risk. All three of these
6 optimizations can be solved as a network design problem, a well-
7 known approach that can be implemented with existing software
8 tools. Baseman 7:4-15.

9 06. Baseman describes approaches used to optimize a firm's supply
10 chain within the context of other forms of risk. An efficient
11 frontier can be created that identifies optimal supply chain designs
12 to maximize profitability or firm value at a given risk level with
13 respect to one or more sources of risk, such as political risk,
14 catastrophe risk, business risk, geographical risk, and/or local
15 market risks. Baseman 8:28-35.

16 07. The strategic and tactical sourcing decisions are extended to
17 control risk using heuristics, expert systems, simulation, and
18 optimization techniques such as linear programming to optimize
19 profit. Baseman 16:6-54.

20 08. Risk management objectives are construed rather broadly to
21 include any form of risk that affects the firm. If the process is
22 affected by risk management objectives, then one or more risk
23 management objectives are integrated to improve the performance
24 of the activity or solution, which can be performed in a number of
25 different ways, depending an the nature of the activity or solution,

1 and the objective being integrated. Typical approaches could use
2 techniques such as heuristics, consulting methodologies,
3 simulation, and optimization. Examples of objectives that could
4 be integrated include mitigation or reduction of risk factors such
5 as market risk, business risk, interest rate risk, uninsurable
6 catastrophe risk, weather risk, political risk, liquidity risk, credit
7 risk, and counterparty risk. SCM and/or FM techniques are
8 employed to improve the performance of the activity or solution.
9 Typical approaches could use techniques such as linear
10 programming, mixed integer programming, and other optimization
11 and scheduling techniques, value at risk techniques, option
12 valuation analytics, and portfolio management techniques.
13 Baseman 27:17 – 28:25.

14 *Tamayo*

15 09. Tamayo is directed to an enterprise web mining system for
16 generating online predictions and recommendations. Tamayo
17 1:12-14.

18 10. Tamayo describes the practice of using an enterprise's data as
19 input for the enterprise's systems. Tamayo 1:36-47.

20 11. Tamayo describes learning models as among the inductive
21 reasoning models that capture relationships, correlations, and
22 trends in data. Tamayo 21:25-57.

23 *Ching*

24 12. Ching is directed to price determination. Ching 1:11-15.

1 13. Ching lists a number of valuation modalities used in financial
2 models. Among those are intellectual properties, risk assessment
3 and management.

4 *Packwood*

5 14. Packwood is directed to identifying, evaluating, and responding
6 to business operation risks. Packwood 1:7-10.
7 15. Packwood describes characterizing risk as acceptable or
8 unacceptable. Packwood 5:56-67.

9 *Ranger*

10 16. Ranger is directed to information visualization and discovery.
11 Ranger 1:17-18.
12 17. Ranger describes the use of metamodels, being structured
13 generic models as frameworks for implementing specific
14 information models, and metadata for information discovery,
15 modeling and visualization. Ranger 5:43-51. Ranger also
16 describes the use of XML as among the languages used for
17 presentation media. Ranger 10:15-26.

18

19 ANALYSIS

20 *Claims 157-181 and 201-213 rejected under 35 U.S.C. § 101 as directed to
21 non-statutory subject matter.*

1 The Appellant argues claims 201-206 as a group. Accordingly, we
2 select claim 201 as representative of the group. 37 C.F.R. § 41.37(c)(1)(vii)
3 (2008).

4 These claims are to a management method. Claim 201 is independent
5 and recites steps including aggregating and preparing data and learning as
6 required. The Examiner found that claim 201 recites no more than an
7 abstract idea. The Appellant contends that the claim produces a useful,
8 tangible and concrete result.

9 Here we disagree with the Appellant. The Supreme Court recently held
10 that claims that explained the basic concept of an activity (hedging) would
11 allow the Appellant to pre-empt the use of this approach in all fields, and
12 would effectively grant a monopoly over an abstract idea. *Bilski v. Kappos*,
13 130 S.Ct. 3218, 3231 (June 2010). Abstract ideas are not patent eligible.
14 *Bilski*, 130 S.Ct. at 3225.

15 Claim 201 does no more than lay out the concept of doing business by
16 collecting information and learning. The claims neither refer to a specific
17 machine by reciting structural limitations to any apparatus, nor recite any
18 specific operations would cause a machine to be the mechanism to aggregate
19 and prepare data and learn as required. Indeed to manage, aggregate data,
20 and learn requires no machine, only the conscious thought of the one
21 controlling the operation. Absent any specific structural limitations on how
22 one performs these steps, these claims recite no more than the abstract
23 concept of managing by learning from collected experience. As in *Bilski*, a
24 patent including these claims would allow the Appellant to pre-empt the use

1 of this approach in all fields, and would effectively grant a monopoly over
2 an abstract idea.

3 The Appellant similarly argues claims 207-213 as a group, but
4 independent claim 207 is directed to a method performing the same steps of
5 claim 201, but using the verb analyzing rather than learning, and similarly
6 contains no structural details that would avoid preempting the concept of
7 performing management.

8 The Appellant argues claims 157-168 as a group and claims 169-181 as
9 a group. Independent claim 157 is directed to computer readable media and
10 independent claim 169 is directed to a machine performing the steps
11 recorded on the medium of claim 157. As these claims contain more than a
12 nominal degree of structure beyond merely executing an abstract idea, we
13 will not sustain the rejection against these claims.

14 *Claims 157-181 and 201-213 rejected under 35 U.S.C. § 112, first
15 paragraph, as not enabling a person of ordinary skill in the art to make and
16 use the claimed subject matter from the original disclosure.*

17 We are persuaded for the reasons set forth in the Appellant's arguments
18 at Reply Br. 16-22 that the Examiner failed to present a prima facie case for
19 lack of enablement.

20 *Claims 157, 159-163, 165-167, 169, 171-176, and 178-180 rejected under
21 35 U.S.C. § 103(a) as unpatentable over Baseman and Tamayo.*

22 We are unpersuaded by the various arguments that Tamayo is either
23 incompatible with or would be inoperable with Baseman. The Examiner
24 made no findings as to interoperability, but rather found that the steps of
25 claim 157 were generally described by Baseman and merely applied Tamayo

1 for evidence of the unremarkable fact that it was known to obtain input data
2 to analyze an enterprise, such as done by Baseman, from an enterprise
3 transaction system. Obtaining enterprise data from an enterprise transaction
4 system would not adversely affect Baseman.

5 We are unpersuaded by the argument that Baseman fails to describe
6 optimization within the constraints of capital, market value optimization,
7 real option analysis, risk. Reply Br. 11. Claim 157 does not recite
8 optimizing per se, but only determining a risk management activity
9 optimizing aspects that might include market value and risk. The claim does
10 not optimize; it only determines an activity. It is sufficient that Baseman
11 determine an activity that would happen to be appropriate and might occur
12 for such optimization, which as the Examiner found (Ans. 9), Baseman does.
13 FF 08.

14 We are unpersuaded by the argument that Baseman fails to describe real
15 options as a category that should be managed. Reply Br. 11. Claim 159
16 depends from claim 157 and so does not require using real options per se,
17 but only that the determined activity would happen to be appropriate for
18 such optimization based on real options. Baseman describes using option
19 analytics for optimization techniques (FF 08), and that real options are
20 included within the analysis of options (FF 02).

21 We are unpersuaded by the argument that Baseman fails to describe risk
22 control transactions or risk transfer. Reply Br. 11. Baseman describes
23 reducing foreign exchange risks as an activity of its system (FF 08), and that
24 real options are included within the analysis of options (FF 02).

1 We are unpersuaded by the argument that Baseman fails to describe
2 development of a computational model of market value. Reply Br. 12.
3 Baseman describes computational models based on heuristics, expert
4 systems, simulation, and optimization techniques; such as linear
5 programming to optimize profit (FF 07). Any model of profit is inherently a
6 model of market value as market value is theoretically the discounted
7 present value of future profits.

8 We are unpersuaded by the argument that Baseman fails to describe
9 optimization of aspects real value option or current operations financial
10 performance. Reply Br. 12. Claim 165 recites that system supports such
11 optimization, not that it actually performs such optimization. As we found
12 *supra*, Baseman describes supporting both real option and current operation
13 profitability analysis.

14 We are unpersuaded by the argument that Baseman fails to describe
15 multi-criteria optimization. Reply Br. 12. Claim 166 depends from claim
16 157 and so does not requiring the use of such optimization per se, but only
17 that the determined activity would happen to be appropriate for such
18 optimization based on multi-criteria or linear programming. Baseman
19 describes optimization with computational models based on heuristics,
20 expert systems, simulation, and optimization techniques; such as linear
21 programming to optimize profit (FF 07).

22 We are unpersuaded by the argument that Baseman fails to describe
23 using linear programming shadow prices. Reply Br. 12. Baseman describes
24 optimization with computational models based on heuristics, expert systems,
25 simulation, and optimization techniques; such as linear programming to

1 optimize profit (FF 07). As one of ordinary skill would know, as it is taught
2 in a first semester production management course, linear programming uses
3 its shadow prices during optimization to determine which constraints to look
4 to in each iteration.

5 We are unpersuaded that the art is not considered under the same
6 standard of review as other patents because the Appellant has provided no
7 basis for this argument. Reply Br. 12.

8 We are unpersuaded by the argument that the references teach away
9 from the claims because the Appellant has not shown that the references
10 discourage direction toward the claimed subject matter.

11 What a reference teaches or suggests must be examined
12 in the context of the knowledge, skill, and reasoning
13 ability of a skilled artisan. What a reference teaches a
14 person of ordinary skill is not, [] limited to what a
15 reference specifically “talks about” or what is specifically
16 “mentioned” or “written” in the reference. Under the
17 proper legal standard, a reference will teach away when it
18 suggests that the developments flowing from its
19 disclosures are unlikely to produce the objective of the
20 applicant’s invention. *In re Gurley*, 27 F.3d 551, 553
21 (Fed.Cir.1994). A statement that a particular combination
22 is not a preferred embodiment does not teach away
23 absent clear discouragement of that combination. *In re*
24 *Fulton*, 391 F.3d at 1199-1200. [] [A] prior art reference
25 that does not specifically refer to one element of a
26 combination does not, per se, teach away. If it did, only
27 references that anticipate could be used to support an
28 obviousness analysis. However, prior art references that
29 are capable of rendering an invention obvious under a
30 section 103 analysis are not limited to reference that also
31 anticipate the patent at issue.

32 *Syntex (U.S.A.) LLC v. Apotex, Inc.*, 407 F.3d 1371, 1380 (Fed. Cir. 2005).

1

2

3 *Claims 201, 202, 204, 207, 209, and 211 rejected under 35 U.S.C. § 103(a)
4 as unpatentable over Baseman, Tamayo, and Ching.*

5 *Claims 158, 164, 170, and 177 rejected under 35 U.S.C. § 103(a) as
6 unpatentable over Baseman, Tamayo, and Packwood.*

7 *Claims 205 and 210 rejected under 35 U.S.C. § 103(a) as unpatentable over
8 Baseman, Tamayo, Ching, and Packwood .*

9 *Claims 168 and 181 rejected under 35 U.S.C. § 103(a) as unpatentable over
10 Baseman, Tamayo, and Ranger .*

11 *Claims 203, 206, and 208 rejected under 35 U.S.C. § 103(a) as unpatentable
12 over Baseman, Tamayo, Ching, and Ranger.*

13 We are unpersuaded by the various arguments that Tamayo, Ching, and
14 Ranger are either incompatible with or would be inoperable with Baseman.
15 The Examiner made no findings as to interoperability, but rather found that
16 the steps of the independent claims were generally described by Baseman
17 and merely applied Tamayo for evidence of the unremarkable fact that it was
18 known to obtain input data to analyze an enterprise, as done by Baseman,
19 from an enterprise transaction system, and to use inductive reasoning
20 learning models to uncover trends in data such as that in Baseman.
21 Obtaining enterprise data from an enterprise transaction system and
22 uncovering data trends would not adversely affect Baseman.

1 The Examiner relied on Ching only to enumerate the types of valuation
2 modalities used in financial models such as those in Baseman, which
3 similarly would not adversely affect Baseman. The Examiner relied on
4 Packwood to show it was known to characterize the risks described by
5 Baseman as acceptable or unacceptable, which correspond to normal or
6 extreme in the lexicon used in the claims. Such characterization would not
7 adversely affect Baseman.

8 The Examiner relied on Ranger to show that the use of metamodels and
9 metadata were known to assist in structuring information such as used by
10 Baseman for improved data visualization and that XML was among the
11 languages used for such data presentation. Structuring data with
12 metamodels and metadata and presenting data with the XML language on a
13 web page or the like would not adversely affect Baseman.

CONCLUSIONS OF LAW

15 Rejecting claims 201-213 under 35 U.S.C. § 101 as directed to non-
16 statutory subject matter is not in error.

17 Rejecting claims 157-181 under 35 U.S.C. § 101 as directed to non-
18 statutory subject matter is in error.

19 Rejecting claims 157-181 and 201-213 under 35 U.S.C. § 112, first
20 paragraph, as not enabling a person of ordinary skill in the art to make and
21 use the claimed subject matter from the original disclosure is in error.

22 Rejecting claims 157, 159-163, 165-167, 169, 171-176, and 178-180
23 under 35 U.S.C. § 103(a) as unpatentable over Baseman and Tamayo is not
24 in error.

1 Rejecting claims 201, 202, 204, 207, 209, and 211 under 35 U.S.C.
2 § 103(a) as unpatentable over Baseman, Tamayo, and Ching is not in error.

3 Rejecting claims 158, 164, 170, and 177 under 35 U.S.C. § 103(a) as
4 unpatentable over Baseman, Tamayo, and Packwood is not in error.

5 Rejecting claims 205 and 210 under 35 U.S.C. § 103(a) as unpatentable
6 over Baseman, Tamayo, Ching, and Packwood is not in error.

7 Rejecting claims 168 and 181 under 35 U.S.C. § 103(a) as unpatentable
8 over Baseman, Tamayo, and Ranger is not in error.

9 Rejecting claims 203, 206, and 208 under 35 U.S.C. § 103(a) as
10 unpatentable over Baseman, Tamayo, Ching, and Ranger is not in error.

DECISION

12 To summarize, our decision is as follows.

- The rejection of claims 201-213 under 35 U.S.C. § 101 as directed to non-statutory subject matter is sustained.
- The rejection of claims 157-181 under 35 U.S.C. § 101 as directed to non-statutory subject matter is not sustained.
- The rejection of claims 157-181 and 201-213 under 35 U.S.C. § 112, first paragraph, as not enabling a person of ordinary skill in the art to make and use the claimed subject matter from the original disclosure is not sustained.
- The rejection of claims 157, 159-163, 165-167, 169, 171-176, and 178-180 under 35 U.S.C. § 103(a) as unpatentable over Baseman and Tamayo is sustained.

- The rejection of claims 201, 202, 204, 207, 209, and 211 under 35 U.S.C. § 103(a) as unpatentable over Baseman, Tamayo, and Ching is sustained.
- The rejection of claims 158, 164, 170, and 177 under 35 U.S.C. § 103(a) as unpatentable over Baseman, Tamayo, and Packwood is sustained.
- The rejection of claims 205 and 210 under 35 U.S.C. § 103(a) as unpatentable over Baseman, Tamayo, Ching, and Packwood is sustained.
- The rejection of claims 168 and 181 under 35 U.S.C. § 103(a) as unpatentable over Baseman, Tamayo, and Ranger is sustained.
- The rejection of claims 203, 206, and 208 under 35 U.S.C. § 103(a) as unpatentable over Baseman, Tamayo, Ching, and Ranger is sustained.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2007).

AFFIRMED

mev

24
25 ASSET TRUST, INC.
26 2020 MALTBY ROAD, SUITE 7362
27 BOTHELL WA 98021